Statewide Collision Categories

Table 1 compares major collision categories and measures of exposure for 1998 through 2001. The total number of traffic collisions in 2001 decreased by 0.6% from 2000, while fatal collisions decreased 6.6%. Total fatalities decreased 6.2% from the previous year, while the number of injuries went down by 1.8%. The number of property damage collisions rose by just 0.2%.

Table 1
Idaho Traffic Collision Data and Measures of Exposure: 1998-2001

	1998	1999	2000	2001	Change 2000-2001	Avg. Change 1998-2000
Total Collisions	24,041	25,076	26,241	26,090	-0.6%	4.5%
Fatal Collisions	224	245	241	225	-6.6%	3.9%
Persons Killed (Fatalities)	265	278	276	259	-6.2%	2.1%
Injury Collisions	9,098	9,256	9,392	9,231	-1.7%	1.6%
Persons Injured	13,920	14,069	14,276	14,021	-1.8%	1.3%
Property-Damage-Only Collisions (Severity >$750)	14,719	15,575	16,608	16,634	0.2%	6.2%
Idaho Population (thousands)	1,229	1,252	1,294	1,321	2.1%	2.6%
Licensed Drivers (thousands)	871	881	893	901	0.9%	1.3%
Vehicle Miles of Travel (millions)	13,644	14,328	13,728	14,299	4.2%	0.4%
Registered Vehicles (thousands)	1,330	1,316	1,340	1,247	-7.0%	0.4%

Changes in the number of collisions can often be correlated with changes in state population, the number of drivers, number of registered vehicles, and the statewide Annual Vehicle Miles of Travel (AVMT). In 2001, the number of licensed drivers increased by 0.9% while the population grew by 2.1%. The number of registered motor vehicles decreased by 7.0% in 2001.

The statewide AVMT increased by 4% in 2001, after decreasing in 2000 for the first time since it decreased from 1979 to 1980. Commercial vehicles accounted for 18% of the statewide AVMT in 2001.

Fatality and Injury Rates

Table 2 shows the fatality and injury rates for 1998-2001.

Table 2
Fatality and Injury Rates per 100 Million AVMT 1998-2001

	1998	1999	2000	2001	Change 2000-2001	Avg. Change 1998-2000
Fatality Rate	1.94	1.94	2.01	1.81	-9.9%	1.8%
Injury Rate	102.02	98.19	103.99	98.06	-5.7%	1.1%

Figures 1 and 2 illustrate fatality and injury rates per 100 million AVMT for the U.S. and Idaho. The 2001 U.S. fatality rate and U.S. injury rate estimates are preliminary and may change.

Figure 1
Traffic Fatality Rates per 100 Million Annual Vehicle Miles of Travel
For Idaho and The U.S.: 1992-2001

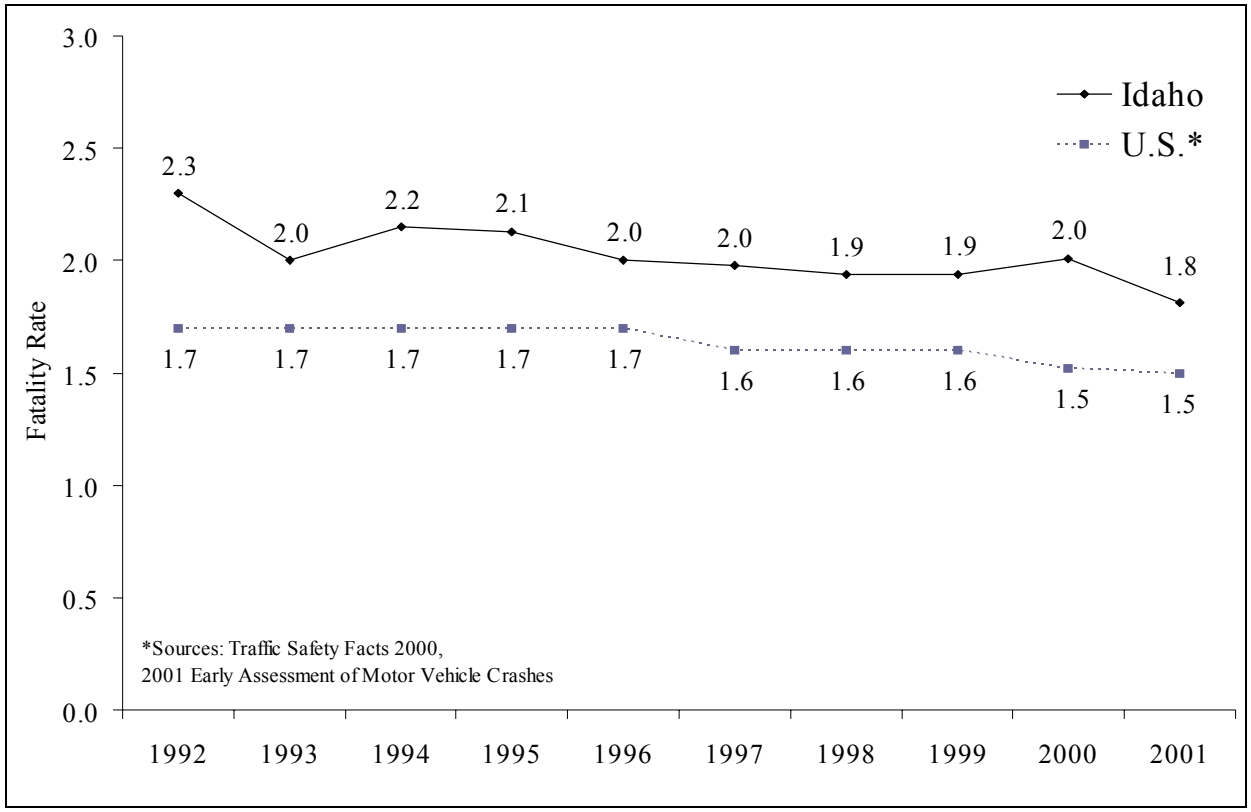
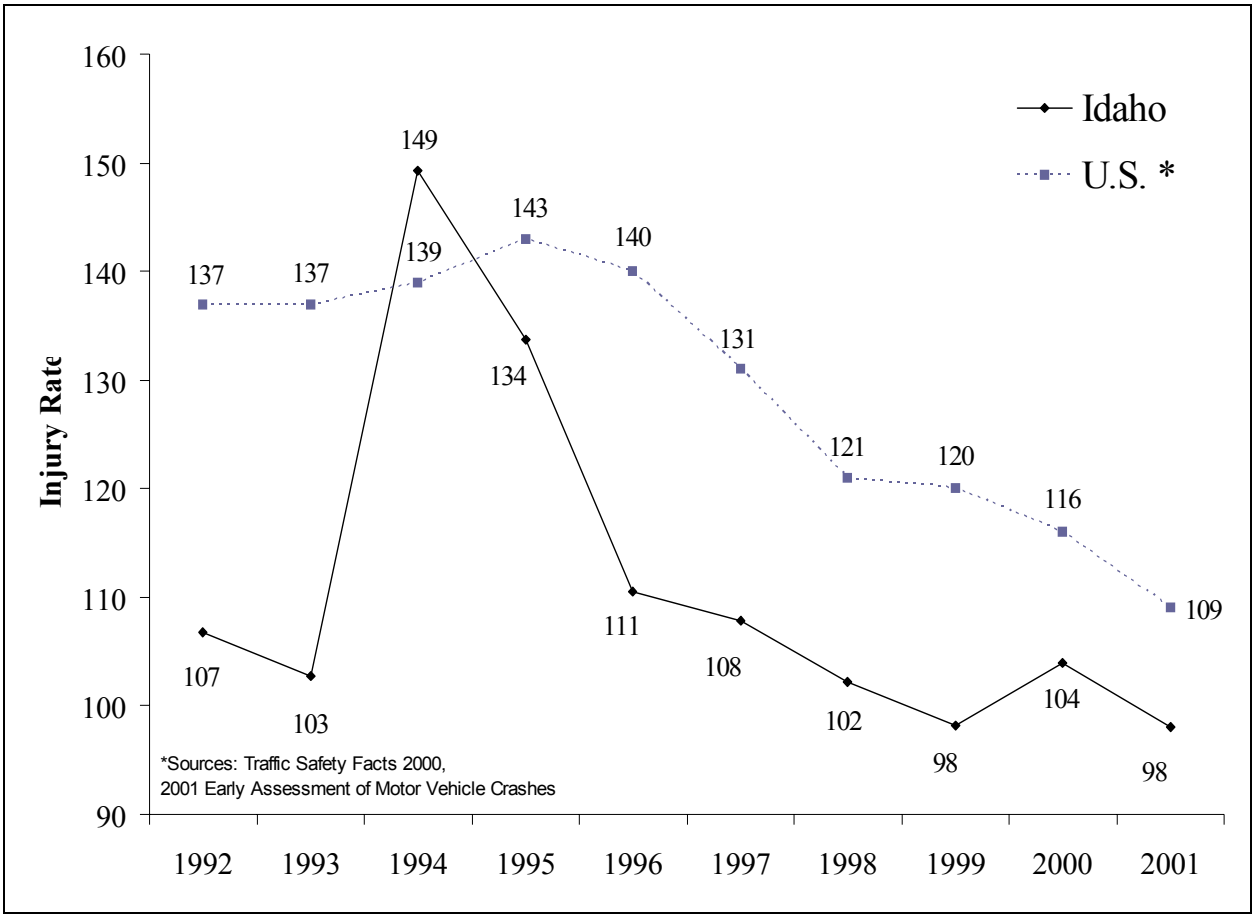


Figure 2

Traffic Injury Rates per 100 Million Annual Vehicle Miles of Travel: 1992-2001



Fatality and injury rates have varied over the past decade. Factors such as vehicle safety features, limited access highways, engineering improvements, occupant restraint usage, demographic changes and reduction in driving under the influence tend to reduce fatalities and injuries. Increases in AVMT, licensed drivers, registered vehicles, changes in reporting, and higher average speeds tend to increase the number of fatalities and injuries. The jump in the injury rate in 1994 corresponds with better identification of injuries after statewide training for law enforcement officers with the introduction of a new collision report form in 1994.

Injury Severity

Table 3 presents the injury severity distribution among persons involved in collisions from 1998 through 2001. The number of fatalities decreased to 259 in 2001

Table 3
Injury Severity of Persons Involved in Collisions: 1998-2001

	1998	1999	2000	2001	Change 2000-2001	Avg. Change 1998-2000
Fatalities	265	278	276	259	-6.2%	2.1%
Serious Injuries	1,825	1,824	1,733	1,615	-6.8%	-2.5%
Visible Injuries	5,157	5,285	5,390	5,258	-2.4%	2.2%
Possible Injuries	6,938	6,960	7,153	7,148	-0.1%	1.5%
No Injuries	49,896	51,316	52,482	52,013	-0.9%	2.6%
Unknown / Missing	497	426	1,238	1,157	-6.5%	88.2%
Total Persons in Collisions	64,578	66,089	68,272	67,450	-1.2%	2.8%

Economic Cost of Collisions

Table 4 gives estimated economic costs for Idaho motor vehicle collisions in 2001. Estimates in this table are based on 1994 Federal Highway Administration (FHWA) cost estimates for collisions.[1] The cost estimates are updated to 2001 dollars using the Gross Domestic Product Implicit Price Deflator Ratio. The components of the cost estimates include productivity losses, property damage, medical costs, rehabilitation costs, travel delay, legal and court costs, emergency service costs, insurance administration costs, premature funeral costs and costs to employers. The estimated cost of Idaho collisions in 2001 was $1.5 billion. The total cost of collisions in 2001 was $45 million dollars less than the estimated cost of collisions in 2000.

Table 4
Economic Cost of Idaho Collisions: 2001 Estimates

Incident Description	Total Occurrences	Cost Per Occurrence	Cost Per Category
Fatalities	259	$3,026,107	$783,761,678
Serious Injuries	1,615	$209,500	$338,342,025
Visible Injuries	5,258	$41,900	$220,309,891
Possible Injuries	7,148	$22,114	$158,069,856
Property Damage Only	16,634	$2,328	$38,720,201
Total Estimate of Economic Cost			**$1,539,203,651**

In addition to the FHWA's study, the National Highway Traffic Safety Administration (NHTSA) also did a study on the costs of collisions. The NHTSA study not only concentrated on the costs of collisions, but also who pays the costs. Table 5 is a combination of table 22 and table 23 from the NHTSA study, "The Economic Impact of Motor Vehicle Crashes, 2000" and shows the source of payment distribution of collision costs for each component of the costs. The total percentage for each source of payment is also included at the bottom.

Table 5
Estimated Source of Payment for Each Motor Vehicle Crash Cost Component

	Federal	State	Total Government	Insurer	Other	Self	Total
Medical	14.40%	9.76%	24.16%	54.85%	6.36%	14.62%	100.00%
Emergency Service	3.87%	75.75%	79.62%	14.74%	1.71%	3.93%	100.00%
Market Productivity	16.20%	3.06%	19.26%	41.09%	1.55%	38.10%	100.00%
Household Productivity	0.00%	0.00%	0.00%	41.09%	1.55%	57.36%	100.00%
Insurance Administration	0.89%	0.51%	1.40%	98.60%	0.00%	0.00%	100.00%
Workplace Costs	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%
Legal / Court	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%
Travel Delay	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%
Property Damage	0.00%	0.00%	0.00%	65.00%	0.00%	35.00%	100.00%
Percentage of Total Costs	**6.41%**	**2.70%**	**9.11%**	**50.26%**	**14.48%**	**26.15%**	**100.00%**

The most significant point from the above table is that society at large picks up nearly 75% of all crash costs incurred by individual motor vehicle crash victims. These costs are passed on to the general public through insurance premiums, taxes, direct out-of-pocket payments for goods and services and increased charges for medical care.[2]

Collisions by Roadway Classification

Table 9 compares the number of total, fatal and injury collisions by urban and rural classification. Urban roadways are defined as those within the city limits of cities with 5,000 people or more. Urban roadways tend to carry higher volumes of traffic at lower speeds while rural roads carry lower traffic volumes at higher speeds.

Table 9
Comparison of Collisions by Roadway Classification: 1998-2001

	1998	1999	2000	2001	Change 2000-2001	Avg. Change 1998-2000
Total Collisions:	24,041	25,076	26,241	26,090	-0.6%	4.5%
Urban	13,953	14,503	15,463	15,752	1.9%	5.3%
Rural	10,088	10,573	10,778	10,338	-4.1%	3.4%
Fatal Collisions	224	245	241	225	-6.6%	3.9%
Urban	28	36	39	40	2.6%	18.5%
Rural	196	209	202	185	-8.4%	1.6%
Injury Collisions:	9,098	9,256	9,392	9,231	-1.7%	1.6%
Urban	5,079	5,129	5,356	5,329	-0.5%	2.7%
Rural	4,019	4,127	4,036	3,902	-3.3%	0.2%

In 2001, 82% of fatal collisions occurred on rural roads, whereas 40% of all collisions occurred on rural roads. In Idaho, 91% of the total road mileage is classified as rural roadway. Rural roads tend to have higher speed limits. Crashes at higher impact speeds have a greater probability of resulting in a fatality.[3]

The high percentage of rural roadways in Idaho may account for the fact that Idaho's fatality rate is consistently higher than the U.S. fatality rate.

Table 10 shows the number of collisions and collision rates on local and state system roadways (both interstate and non-interstate) for 1998-2001, and the number of collisions statewide. Collision rates are lower than the statewide fatality and injury rates shown in Table 2 because multiple fatalities or injuries may occur in a single collision.

Table 10
Collision Rates for Local and State System Roadways: 1998-2001

Roadway Information	1998	1999	2000	2001	Change 2000-2001	Avg. Change 1998-2000
Local:						
VMT (100 millions)	63.3	68.2	61.7	65.9	6.8%	-0.9%
Fatal Collisions	78	87	109	84	-22.9%	18.4%
Injury Collisions	5,210	5,211	5,357	5,216	-2.6%	1.4%
Total Collisions	14,275	14,714	15,740	15,343	-2.5%	5.0%
Fatal Collision Rate	1.2	1.3	1.8	1.3	-27.8%	21.0%
Injury Collision Rate	82.3	76.4	86.8	79.2	-8.8%	3.2%
Total Collision Rate	225.5	215.7	255.1	232.9	-8.7%	7.0%
State System (Non-Interstate):						
VMT (100 millions)	42.9	41.0	44.3	45.1	1.9%	1.8%
Fatal Collisions	97	114	85	98	15.3%	-4.0%
Injury Collisions	2,592	2,639	2,642	3,014	14.1%	1.0%
Total Collisions	6,532	6,897	6,775	8,067	19.1%	1.9%
Fatal Collision Rate	2.3	2.8	1.9	2.2	13.2%	-4.0%
Injury Collision Rate	60.4	64.4	59.7	66.9	12.0%	-0.4%
Total Collision Rate	152.3	168.3	153.1	178.9	16.9%	0.7%
Interstate:						
VMT (100 millions)	30.2	34.1	31.3	32.0	2.2%	2.4%
Fatal Collisions	49	44	47	43	-8.5%	-1.7%
Injury Collisions	1,296	1,406	1,393	1,001	-28.1%	3.8%
Total Collisions	3,234	3,465	3,726	2,680	-28.1%	7.3%
Fatal Collision Rate	1.6	1.3	1.5	1.3	-10.5%	-2.1%
Injury Collision Rate	42.9	41.3	44.5	31.3	-29.7%	2.0%
Total Collision Rate	107.1	101.7	118.9	83.7	-29.6%	6.0%
Statewide Totals:						
VMT (100 millions)	136.4	143.3	137.3	143.0	4.2%	0.4%
Fatal Collisions	224	245	241	225	-6.6%	3.9%
Injury Collisions	9,098	9,256	9,392	9,231	-1.7%	1.6%
Total Collisions	24,041	25,076	26,241	26,090	-0.6%	4.5%
Fatal Collision Rate	1.6	1.7	1.8	1.6	-10.4%	3.4%
Injury Collision Rate	66.7	64.6	68.4	64.6	-5.6%	1.4%
Total Collision Rate	176.3	175.0	191.1	182.5	-4.5%	4.3%

Contributing Circumstances in Collisions

Figure 12 portrays the top seven most prevalent contributing circumstances recorded for fatal collisions, injury collisions, and all collisions. For every vehicle involved in a collision, the investigating officer may indicate up to three circumstances contributing to the cause of the collision.

Figure 12
Top Seven Primary Contributing Circumstances Cited for Traffic Collisions in 2001